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| 09/821,013 | 03/30/2001 | Satoshi Semba | 1075.1159 | 8513 |

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| EXAMINER | |
| --- | --- |
| BURLESON, MICHAEL L | |

| ART UNIT | PAPER NUMBER |
| --- | --- |
| 2626 | |

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 09/821,013 | SEMBA ET AL. |
| | **Examiner** | **Art Unit** |
| | Michael Burleson | 2626 |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-28 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Priority*

***1.*** Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) was submitted on March 30, 2001. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubo et al. US 6014457.

3. Regarding claim 1, Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on object color designating means for designating an object color to be converted in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data

the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means. He teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines 36-45 and figure 1). This reads on a lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

Regarding claim 2, Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). He also teaches of a chroma deviation computing means (242) and hue deviation computing means (243) in which the chroma and hue are computed between L*a*b* and the chroma and hue settings (column 8,lines 49-62). This reads on said lightness converting means converts said object color in lightness using said lightness conversion factor to create a lightness-changed object color and said apparatus further comprises hue and chroma converting means for converting said lightness-changed color image in hue and chroma based on a color difference between said lightness-changed object color and said optimum color.

Regarding claim 3, Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on object color designating means designates a plurality of objects colors. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on said optimum color setting means sets a plurality of optimum colors respectively corresponding to the plural object colors. He teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45). Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). This reads on lightness conversion factor obtaining means obtains a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors, and also obtains an average weighting value of said plural individual lightness conversion factors as said lightness conversion factor, using weighting factors respectively corresponding to said plural optimum colors.

Regarding claim 4, claim 4 is rejected for the same reasons as claim 3.

Regarding claim 5, Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). He also teaches that data ranges and a data item ratio are set in advance. The image data is then checked to see if it falls between a certain ratio (column 12,lines 61-67). This reads on apparatus further

comprises an optimum color database previously retaining color values of various optimum colors and optimum color setting means sets said optimum color corresponding to said object color as selected from said optimum color database.

Regarding claim 6, claim 6 is rejected for the same reasons as claim 5.

Regarding claim 7, Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). He also teaches that data ranges and a data item ratio are set in advance. The image data is then checked to see if it falls between a certain ratio (column 12,lines 61-67). This reads on apparatus further comprises an optimum color database previously retaining color values of various optimum colors and optimum color setting means sets said optimum color corresponding to said object color as selected from said optimum color database. Kubo et al. teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45). Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). He also teaches that data ranges and a data item ratio are set in advance. The image data is then checked to see if it falls between a certain ratio (column 12,lines 61-67). This reads on a lightness conversion factor obtaining means reads out more than one weighting factors corresponding to the individual optimum colors from said optimum color database.

Regarding claim 8, Kubo et al. teaches that data ranges and a data item ratio are set in advance. The image data is then checked to see if it falls between a certain ratio

in the characteristic color region extracting means (231) (column 12,lines 55-67). He also teaches of memory colors that are typically constituted with the characteristic color regions (column 8,lines 23-31). This reads on an optimum color database previously retaining color values of various optimum colors and also weighting factors corresponding to the individual optimum colors. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-31). This reads on optimum color setting means sets more than one optimum colors respectively corresponding to said plural object colors as selected from said optimum color data base. He teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45). Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data from the characteristic color region (231) (column 8,lines 44-52 and figure 3). This reads on lightness conversion factor obtaining means reads out more than one weighting factors corresponding to the individual optimum colors from said optimum color database.

4. Regarding claim 9, Kubo et al. teaches that the apparatus (100) can read color image by a computer and storage medium (column 6,lines 23-27), which reads on a computer-readable recording medium in which a color image processing program is recorded, wherein said color image processing program instructs a computer. Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on object color designating means for designating an object color to be converted

in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means. He teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines 36-45 and figure 1). This reads on a lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

Regarding claim 10, claim 10 is rejected for the same reasons as claim 2.

Regarding claim 11, claim 11 is rejected for the same reasons as claim 3.

Regarding claim 12, claim 12 is rejected for the same reasons as claim 4.

5. Regarding claim 13, Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on designating an object color to be converted in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions

attracting the user's attention the most (column 8, lines 22-26). This reads on setting optimum color corresponding to said object color designated by said designating step (a). He teaches of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on obtaining lightness conversion factor based on said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on defined L*a*b* data (column 8,lines 44-52). Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines 36-45 and figure 1). This reads on converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

Regarding claim 14, claim 14 is rejected for the same reasons as claim 2.

Regarding claim 15, claim 15 is rejected for the same reasons as claim 3.

Regarding claim 16, claim 16 is rejected for the same reasons as claim 4.

6. Regarding claim 17, Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on object color designating means for designating an object color to be converted in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means.

Kubo et al. teaches of an output image predicting means (233) that uses received data and predicts L*a*b*(column 8,lines 40-46), which reads on a preliminary lightness conversion amount obtaining means for obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on lightness values of L*a*b* data and characteristic colors of the output image predicting means (233) (column 8,lines 44-52), which reads on practical lightness conversion amount obtaining means for obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount. Kubo et al. teaches of a of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said practical lightness conversion amount, said object color and said optimum color. Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines 36-45 and figure 3). This reads on a lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

Regarding claim 18, Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on predicted lightness values of L*a*b* data that are defined before hand (column 8,lines 44-52). This reads on said practical lightness

conversion amount obtaining means obtains said lightness conversion amount such as to approximate a predetermined value as said preliminary lightness conversion amount increases.

Regarding claim 19, Kubo et al. teaches of an output image predicting means (233) that uses received data and predicts L*a*b* following a first color conversion (210) (column 8,lines 40-48), which reads on preliminary lightness converting means for preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.

Regarding claim 20, claim 20 is rejected for the same reasons as claim 19.

7. Regarding claim 21, Kubo et al. teaches that the apparatus (100) can read color image by a computer and storage medium (column 6,lines 23-27), which reads on a computer-readable recording medium in which a color image processing program is recorded, wherein said color image processing program instructs a computer. Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on object color designating means for designating an object color to be converted in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means. Kubo et al. teaches of an output

image predicting means (233) that uses received data and predicts L*a*b*(column 8,lines 40-46), which reads on a preliminary lightness conversion amount obtaining means for obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on lightness values of L*a*b* data and characteristic colors of the output image predicting means (233) (column 8,lines 44-52), which reads on practical lightness conversion amount obtaining means for obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount. Kubo et al. teaches of a of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said practical lightness conversion amount, said object color and said optimum color. Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines 36-45 and figure 3). This reads on a lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

Regarding claim 22, claim 22 is rejected for the same reasons as claim 18.

Regarding claim 23, claim 23 is rejected for the same reasons as claim19.

Regarding claim 24, claim 24 is rejected for the same reasons as claim 20.

8. Regarding claim 25, Kubo et al. teaches of an image input apparatus (100) that receives color images and may read the image data and convert it into RGB data (column 6,lines 7-11 and 13-20), which reads on designating an object color to be converted in an input color image. Kubo et al. teaches of a characteristic color region extracting means (231), which extracts from RGB data the characteristic color regions attracting the user's attention the most (column 8, lines 22-26). This reads on setting an optimum color corresponding to said object color designated by said object color designating means. Kubo et al. teaches of an output image predicting means (233) that uses received data and predicts L*a*b*(column 8,lines 40-46), which reads on a obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said object color and said optimum color. Kubo et al. teaches of a lightness deviation computing means (241) that sets lightness based on lightness values of L*a*b* data and characteristic colors of the output image predicting means (233) (column 8,lines 44-52), which reads on obtaining means for obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount. Kubo et al. teaches of a of the output image predicting means (233) that uses received data and predicts L*a*b* color data (column 8,lines 40-45), this reads on obtaining a lightness conversion factor based on said practical lightness conversion amount, said object color and said optimum color. Kubo et al. teaches of a parameter determining means (230), which determines the parameters for lightness conversion (column 6,lines

36-45 and figure 3). This reads on converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

9. Regarding claim 26, claim 26 is rejected for the same reasons as claim 18.

10. Regarding claim 27, claim 27 is rejected for the same reasons as claim 19.

11. Regarding claim 28, claim 28 is rejected for the same reasons as claim 20.

## *Conclusion*

1. Any inquiry concerning this communication should be directed to Michael Burleson whose telephone number is (703) 305-8683 and fax number is (703) 746-3006. The examiner can normally be reached Monday thru Friday from 8:00 a.m. – 4:30p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached at (703) 305-4863

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KA Williams
KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER

Mlb
December 12, 2004